primary studies - published, non RCT

Effects of insulin therapy optimization with sensor augmented pumps on glycemic control and body composition in people with cystic fibrosis-related diabetes.

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Study design (if review, criteria of inclusion for studies)

Non-randomized clinical trial

Participants

Adults with CF -related diabetes (CFRD) resulting from partial-to-complete insulin deficiency. 46 participants

Interventions

Sensor augmented pump (SAP) therapy, combined with a structured educational program. Of 46 participants who were offered to switch from MDI to SAP therapy, 20 accepted and 26 continued the MDI therapy.

Outcome measures

Glycemic control and body composition.

Main results

After 24 months changes in HbA1c were: -1.1% (-12.1 mmol/mol) (95% CI: -1.5; -0.8) and -0.1% (-1 mmol/mol) (95% CI: -0.5; 0.3) in the SAP and MDI therapy group, respectively, with a between-group difference of -1.0 (-10 mmol/mol) (-1.5; -0.5). SAP therapy was also associated with a decrease in mean glucose (between group difference: -32 mg/dL; 95% CI: -44; -20) and an increase in TIR (between group difference: 19.3%; 95% CI 13.9; 24.7) and in fat-free mass (between group difference: +5.5 Kg, 95% CI: 3.2; 7.8).

Authors' conclusions

Therapy optimization with SAP led to a significant improvement in glycemic control, which was associated with an increase in fat-free mass.

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See also

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Keywords

Diabetes Mellitus; Gastrointestinal Diseases; non pharmacological intervention - devices OR physiotherapy; Pancreatic Diseases; insulin;